

02-1-852

What is claimed is:

1. An electrical feed-through for a discharge lamp, comprising:
an elongate core having a plurality of grooves extending in a longitudinal
direction in an exterior surface of said core; and
5 a plurality of separate electrically conductive wires each extending in a
different one of said plural grooves, ends of each of said plural wires extending
beyond ends of said core and at least one of said ends of said plural wires being
twisted together.
2. The electrical feed-through as claimed in claim 1, wherein said plural wires
10 are one of molybdenum and tungsten.
3. The electrical feed-through as claimed in claim 2, wherein said plural wires
are molybdenum, and wherein said plural wires are twisted at one of said ends and are
attachable to a lead wire.
4. The electrical feed-through as claimed in claim 1, wherein said core is
15 ceramic.
5. The electrical feed through as claimed in claim 4, wherein said core is
alumina.
6. The electrical feed through as claimed in claim 5, wherein said plural wires
each have a diameter of up to about 0.25 mm.
- 20 7. The electrical feed through as claimed in claim 1, wherein said plural
grooves number six.
8. A discharge lamp comprising:
a discharge tube;
a capillary extending from at least one end of said discharge tube;

02-1-852

an elongate ceramic core within said capillary having a plurality of grooves extending in a longitudinal direction in an exterior surface of said core and a plurality of separate wires each extending in a different one of said plural grooves, first and second ends of each of said plural wires extending beyond ends of said ceramic core and being twisted together;

an electrode at said first end of said plural wires extending into said discharge tube; and

a seal at one end of said capillary.

9. The high intensity discharge lamp as claimed in claim 8, wherein said core is alumina and has six grooves.

10. The high intensity discharge lamp as claimed in claim 8, wherein said plural wires are selected from molybdenum and tungsten.

11. The high intensity discharge lamp as claimed in claim 8, wherein a part of said core extends outside said capillary, and wherein the seal comprises a donut-shaped frit surrounding said part of said core that extends out of said capillary.

12. The high intensity discharge lamp as claimed in claim 8, wherein said electrode is a tungsten electrode connected to said first end.

13. The high intensity discharge lamp as claimed in claim 8, wherein said plural wires are tungsten and said plural wires twisted at said first end are said electrode.

14. The high intensity discharge lamp as claimed in claim 8, wherein said discharge tube is a high intensity discharge (HID) ceramic tube.

15. The high intensity discharge lamp as claimed in claim 8, wherein said discharge tube and said core have substantially the same coefficient of thermal

02-1-852

expansion, and wherein the coefficient of thermal expansion of said plural wires is about one half of the coefficient of the thermal expansion of said core.

16. The high intensity discharge lamp as claimed in claim 8, wherein said core is generally cylindrical and said plural grooves are evenly spaced around a circumference of said core.

17. A feed-through comprising:
a fluted ceramic core having plural channels; and
a plurality of individual tungsten wires that are each in a different one of said plural channels, ends of each of said plural wires extending beyond ends of the core and are twisted together to form an electrode tip.

18. The feed-through as claimed in claim 17, wherein the plural channels number six and are parallel to each other about a longitudinal axis of the core.

19. The feed-through as claimed in claim 17, wherein the plural wires each have a diameter of up to about 0.25 mm.

20. The electrical feed-through of claim 1 wherein of claim 1 wherein the core has a hexagonal, rectangular, or oval cross section.

21. The discharge lamp of claim 8 wherein the core has a hexagonal, rectangular, or oval cross section.

22. The feed-through of claim 17 wherein the core has a hexagonal, rectangular, or oval cross section.